

## HANGER FOR PLASTIC BAGS AND POUCHES

The invention concerns a hanger for plastic bags according to the introductory part of patent claim 1. Hangers of this kind are used for the display of merchandise which is attached to a hanger.

A comparable hanger for folding objects to be displayed has become  
 5 known with the subject of EP 540 810 A1. With this hanger, on a flat card body two mutually opposed holding strips are arranged in each case at the side edges of the card body so as to be pivotable via film hinges. The holding strips are latchable to each other and so form a clamping gap between the card body and the respective holding strip. A folding object to be displayed  
 10 can now be wedged in this clamping gap and thus held and displayed.

A hanger of this kind is suitable only for folding objects to be displayed, because the objects can only be wedged in the clamping gap between the card body and the holding strips which are latchable to each other. A hanger of this kind is however not suitable for the support of plastic  
 15 bags in which is packed the merchandise to be displayed.

It is therefore the object of the invention to develop a hanger of the kind mentioned hereinbefore in such a way that it is suitable for the support of plastic bags.

<sup>sub</sup>  
A1 → To achieve the set object, the invention is characterised by the  
 20 technical instruction of claim 1.

A substantial characteristic of the invention is that a plastic bag or a plastic pouch in which is packed the object to be packed and displayed, is held with the upper edge in the gap between at least one holding strip and a fastening surface arranged on the card body.

25 The invention therefore provides, by contrast with EP 540 810 A1, that a plastic bag is attached with an upper edge in the gap between at least one holding strip and the card body. By this means there is the advantage that the objects to be displayed now no longer have to be wedged in folded form in the holding strip, but that instead a plastic bag is wedged in the clamping gap

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between the holding strip and the card body, in which in turn are packed the objects to be displayed.

With this type of display of merchandise there are substantial advantages which are described in more detail with the aid of a practical example.

It is known that plastic bags can be made of a relatively thin PE or PP plastic material. This type of packing is used for lightweight tools and accessories, since these bags are not very portable. These bags are preferably stapled by their upper edge to a cardboard strip with staples.

Due to the type of attachment of the bag to the card body used, there is the disadvantage that the bag can now be removed from the card body by tearing off and, after tearing off, can be opened only with difficulty due to the tear edges formed. Reclosure is moreover no longer possible.

Previously it was further known that for example heavier tools or other heavier objects can be packed in plastic bags. The plastic bag is preferably made of a thicker PVC or PP material which is tear-resistant. These bags have on the upper side a hanging bag with a recess formed therein.

As a rule plastic bags of this kind are printed and bear on their surface the labelling of the merchandise, certain merchandise details and for example also the price.

It is disadvantageous that in the case of heavy merchandise the hanging bag is unattractively deformed.

This type of merchandise display has serious drawbacks. The printed plastic bag must always be coordinated with the merchandise contained in it. This requires keeping relatively large stocks, on the one hand of plastic bags and on the other hand of merchandise specially to be packed in the respective type of plastic bag. Each item of merchandise must be precisely coordinated with the plastic bag provided and printed therefor.

Here begins the invention, which proposes preferably using an unprinted plastic bag, but which is held in the clamping gap with holding strips arranged on the card body and the card body.

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If unprinted plastic bags are used, first of all there is the advantage that the bag can be kept completely neutral, and the object contained in it is not concealed by print on the bag, advertising and the like. It is therefore readily visible.

5        According to the invention the card body used with the plastic bag is now designed with a large area, so that appropriate indications of the type and quality of the merchandise, its use and its price can be given on the front, and if occasion arises also on the back. Labelling of the merchandise is effected in this case by means of rapidly printable labels on the card body.

10       Hence there is the substantial advantage that stockkeeping is now substantially less because for any objects to be packed there are used neutral plastic bags in which is contained the object to be packed, and that actual coordination between the object and the information belonging to the object is effected by print on the card body itself.

15       This type of packing technology presupposes that the plastic bag is attached to the card body releasably, or releasably only by destruction.

20       For a releasable or non-removable connection of the plastic bag to the card body of this kind, there are a number of embodiments which are all claimed individually on their own and also in combination with each other as essential to the invention.

In one simple embodiment it is provided that the holding strip is latchable by latch means to the fastening surface on the card body.

25       In this case one or more holding strips can be linked to the card body on one side in each case by a horizontal or vertical pivot axis, the pivot axis being preferably formed by a film hinge between the holding strip and the card body. This requires that the card body and the holding strip are connected to each other integrally in material, and preferably made of a plastic material or a multi-layer plastic material.

30       With this choice of material, when making the card body in combination with the holding strip attached thereto the film hinge can very easily be formed as well.

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Opposite the film hinge on the holding strips are arranged corresponding latch means with which they are releasably or permanently latchable to the card body.

Such latch means can be constructed differently. In one preferred  
5 embodiment it is a latch strip which is arranged at the free pivotable end of the holding strip and which encompasses the card body on the narrow side and in this way is latchable to the latter.

In addition to latch means arranged at the end of the holding strip, however, there may also be latch means which are arranged on the surface  
10 of the holding strip and which cooperate with associated counter latch means on the card body.

It is moreover irrelevant for the success of the instruction according to the invention whether one or more holding strips are arranged on the card body, and whether they are attached to the card body by a horizontal or  
15 vertical axis by respective film hinges.

Naturally the film hinges can also be omitted and the holding strips can be latchable to the card body as separate components.

Another embodiment of the latch means described consists for example in that on the holding strip are arranged one or more latch pins  
20 which cooperate with corresponding recesses in the card body.

Naturally the kinematic reversal is also claimed as essential to the invention for all the latch means described, i.e., referred to the embodiment described here, also on the card body may be arranged the latch pins which cooperate with associated latch recesses in the holding strip.

25 In addition to such latch means there are of course also other latch means such as for example hook and pile-type fastenings, press stud fastenings and the like. Instead of the releasable or fixed latch means, non-releasable connections such as friction weld joints, adhesive joints and the like which must be destroyed on opening are also claimed.

30 Since therefore preferably the plastic bag is attached to the card body with the aid of holding strips provided with latch means, in the simplest form it

is provided that the bag is easily pulled through the holding strip and, if it comprises an upper closure bead, protrudes with this closure bead upwardly from the holding strip, so that its flat portion is easily clamped by the clamping gap which is formed by the card body and the holding strip, and the bead-like  
5 thicker portion at the upper edge of the bag protrudes upwardly from the holding strip and there rests on the holding strip.

The clamping gap formed by the holding strip and card body is therefore narrower than the edge closure bead of the plastic bag, so that the latter is held reliably in the holding strip.

10 In another embodiment of the invention it is provided that in the upper region of the bag are provided corresponding recesses which cooperate with associated pins on the holding strip of the card body and through which these pins extend. The holding strip in this embodiment has two different latch means, namely firstly the edge latch means, formed from a latch strip  
15 attached to the holding strip at the end and joined to the latter integrally, and secondly in addition latch pins which are joined integrally to the holding strip and which pass through the recesses in the plastic bag, which thus hold the plastic bag and in the closed state are latched in associated recesses in the card body. The latch means can, according to the requirements of the  
20 application, be easy to open or, for reasons of theft, be fixed and releasable only by destruction.

Instead of several spaced-apart latch pins, however, a single latch knob can be provided on the inside of the holding strip, which engages in an associated elongate and approximately slot-like latch recess in the card body.

25 This elongate and approximately horizontally oriented latch knob then passes through a correspondingly adapted recess in the upper region of the bag, so that the latter is in turn held by this additional support means in the clamping gap between the holding strip and the card body.

One particular advantage with the invention results from the possibility  
30 of using a guarantee label. If the latching of the holding strip to the card body is made flush with the other surfaces of the hanger, a guarantee label can be

On opening the holding strip the label must be damaged, so that in the sales room it can be seen very quickly if the customer has undesirably joined a plastic bag with different contents to a hanger.

For this purpose the invention provides that through the clamping surface between the holding strip and the card body passes a horizontal transverse groove in which is laid the bead-like closure edge of the plastic bag to be held.

This results in improved support of the plastic bag in the clamping gap, because added to support in the clamping gap there is support of the closure bead in the transverse groove.

In particular it is preferred if on the inside of the holding strip are arranged corresponding mandrels opposite which associated recesses are located in the card body.

The plastic bag to be held is laid with its closure bead in the transverse groove in the region of the clamping gap while the holding strip is open; the latter is then closed, so that then the mandrels arranged on the holding strip pass through the plastic bag and enter the associated recesses in the card body and are fixed there.

Naturally, the mandrels described can also be supplemented by additional latch means between holding strip and card body, which likewise pass through associated recesses in the plastic bag and hold them in addition.

But in a simplified embodiment these mandrels can also be omitted and it may simply be provided that the closure bead of the plastic bag is held

in an associated transverse groove in the clamping gap between card body and holding strip.

It is once again pointed out that all the holding means and latch means described above are interchangeable with each other and can be arranged  
 5 on a hanger individually on their own and also in combination with each other.

The subject of the present invention follows not only from the subjects of the individual patent claims, but also from the combination of the individual patent claims with each other.

10 All the details and characteristics disclosed in the documents including the abstract, in particular the three-dimensional construction shown in the drawings, are claimed as essential to the invention as far as they are novel individually or in combination compared with the state of the art.

Below, the invention is described in more detail with the aid of  
 15 drawings showing several embodiments. Here, further characteristics essential to the invention and advantages of the invention are apparent from the drawings and the description thereof.

They show:

- Figure 1: View of the hanger with the holding strip open.
- 20 Figure 2: The side view of the hanger with the holding strip closed in the state ready for packing.
- Figure 3: The end view of the arrangement according to Figure 1.
- Figure 4: A first embodiment of the construction of the top portion and opening region of the plastic bag.
- 25 Figure 5: A second embodiment of the construction of the top portion of the plastic bag.
- Figure 6: An embodiment of a hanger modified from Figure 1.
- Figure 7: The hanger according to Figure 6 in a side view.
- Figure 8: Section through the closure region of the hanger.
- 30 Figure 9: A third embodiment of a hanger.
- Figure 10: The hanger according to Figure 9 in a side view.

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Figure 11: A fourth embodiment of a hanger.

Figure 12: The side view of the hanger according to Figure 11.

Figure 13: The top view of the closure region of the hanger according to Figure 11 in the closed state.

- 5    Figures 14-15: The different constructions of the plastic bag corresponding to Figures 4 and 5 for use with the hanger according to Figures 11 to 13.

10    The hanger 1 according to Figures 1 to 3 is preferably made of a plastic material which can be constructed in one or more layers. There is a relatively flat card body 2 in the lower region of which is formed a clamping receptacle for plastic bags 16 to be held.

15    The clamping receptacle according to Figures 1 to 3 consists of a holding strip 11 which is connected on one side by a film hinge 10 to the material of the card body 2 and which in a vertical axis is linked pivotably to the side edge of the card body.

At the free end of the holding strip 11 is integrally formed a latch strip 13 which in the latched state encompasses the side edge 14 of the card body 2.

20    In the card body 2 is arranged an upper recess 3 through which a hook passes in a known manner, so that the hanger 1 can be hung on a specific display surface.

Different designs of plastic bags 16 can be clamped in the clamping gap between the inside of the holding strip 11 and the associated fastening surface 7 on the card body 2, but also thinner plastic bags.

25    In the general description it has already been pointed out that in particular the support of plastic bags is achieved in a very simple manner by the fact that a plastic bag with an upper closure bead which protrudes beyond the edge 8 of the fastening surface 7 is used, so that on closure of the holding strip 11 the closure bead lies above the edge 8. Hence the plastic  
30    bag 16 is prevented from sliding down.



In the description below, the support of a plastic bag 16 is described. For reasons of simplification the support of a thinner plastic bag is not shown in more detail, although this support can be constructed the same.

In the embodiment shown, however, further support means for the plastic bag 16 are provided.

Here, on the inside of the holding strip are integrally formed latch pins 12 which correspond to associated recesses 9 in the card body 2.

In the top portion 17 and opening region of the plastic bag 16 according to Figure 4 there are associated recesses 18 which correspond to the latch pins 12.

On closure of the holding strip 11 (the latter is pivoted in arrow direction 35 about the film hinge 10), therefore, the latch pins 12 pass through the recesses 18 of the plastic bag 16 and the latter is additionally held in the clamping gap between holding strip 11 and fastening surface 7.

A particular advantage arises when the fastening surface 7 recedes from the front side 4 of the card body, so that when the holding strip 11 is closed according to Figure 2 the card body 2 forms a continuous plane surface.

On this surface can now according to Figure 2 be stuck a label 6 which also overlaps the region of the holding strip 11, so that on opening the holding strip 11 the label 6 must be damaged.

To the label 6 on the front 4 are in this case applied suitable indications of the type and quality of the merchandise packed in the plastic bag 16.

The back 5 of the card body 2 can bear an inscription in addition.

Also the label can be stuck simultaneously on the front and back.

Instead of the individual adjacent recesses 18 in the plastic bag 16, according to Figure 5 there can be used an elongate recess 19 which cooperates with a corresponding elongate latch knob on the inside of the holding strip 11.

Figures 6 to 8 show another embodiment of a hanger 20 in which the same reference numbers have been used for the same components. Here the holding strip 21 is joined in a horizontal pivot axis by a film hinge 26 to the material of the card body 22, and on the inside of the holding strip 21 are  
 5 here provided mandrels 24 which, when the holding strip is latched to the side edges of the card body 22, penetrate the material of the plastic bag 16 and hold it. As an extra means of protection for a plastic bag designed with a closure bead it may also be provided that in the region of the fastening surface 7 of the card body 22 is arranged a transverse groove 27 which in the  
 10 embodiment shown is formed integrally in the card body 22 itself. Instead of the transverse groove 27, an open slot passing through the card body can be used.

In a manner known in the art, the closure of a plastic bag 16 of this kind consists of a closure bead 28 which is pressed into an associated  
 15 closure groove 29.

The named parts 28, 29 are now laid in the transverse groove 27 and the holding strip 21 is closed in arrow direction 26, so that firstly the mandrels 24 pass through the material of the plastic bag and secondly the transverse groove 27 is closed, as shown in Figure 8.

20 It is self-evident that, instead of the mandrels 24 shown here, the latch means 9, 12 according to the embodiment of Figures 1 to 3 can be used.

Latching of the holding strip 21 is effected here by two latch strips 23 which are each mounted laterally on the holding strip and which each snap-fit with the side edges 14 of the card body 22.

25 The mandrels 24 then moreover engage in recesses 25 in the card body 22. The kinematic reversal in which the mandrels are arranged in the region of the fastening surface 7 on the card body 22 and the associated recesses are provided in the holding strip 21 is of course possible too.

Similarly it is not necessary to the solution that the transverse groove  
 30 27 is made in the region of the back 5 of the card body 22.

The above construction does of course have the advantage that by this means again a continuous plane surface is achieved on the front 4 of the card body 22, which can in turn have a label 6 stuck over its whole area. But it may also be provided that the transverse groove is arranged both in the card body and in the holding strip or only in the holding strip alone. But the transverse groove can always be replaced by a slot.

In Figures 9 and 10 is shown a further embodiment of a hanger 30 showing a holding strip 31 which is arranged on the card body 34 so as to be pivotable about a horizontal axis in the film hinge 26, latching of the holding strip 31 being accomplished with the latch strips 23 in the same way as illustrated in Figures 6 and 7. As a simplified embodiment compared with Figures 6 and 7 it is shown that only one transverse groove 27 is formed on the back of the card body 34, and that support of the plastic bag is effected only in the region of the transverse groove and the adjoining clamping gap 37.

Such simple support is particularly suitable for the support of plastic bags with transversely extending closure seam 28, 29.

In Figures 11 to 13 as a further embodiment of a hanger 40 is shown a card body in which again a holding strip 33 is linked to the card body in a film hinge 26 so as to be pivotable about a horizontal axis.

Support of the plastic bag is here effected by the latch means 9, 12 which have already been described with the aid of Figures 1 to 3.

In addition the plastic strip is also held in the clamping gap 37 between card body and holding strip 33.

This embodiment shows, in comparison with Figures 1 to 3, that the holding strip can be linked to the card body so as to be pivotable both in a horizontal axis and in a vertical axis.

The invention is not confined only to the support of plastic bags in which is packed corresponding merchandise to be displayed.

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It may also be provided that the merchandise itself is held on the card body by the receiving means described above with the aid of all embodiments, in combination with the holding strips described.

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Legend to drawings

	1	hanger
	2	card body
	3	recess
5	4	front
	5	back
	6	label
	7	fastening surface
	8	edge
10	9	recess
	10	film hinge
	11	holding strip
	12	latch pin
	13	latch strip
15	14	side edge
	16	plastic bag
	17	top portion
	18	recess
	19	recess
20	20	hanger
	21	holding strip
	22	card body
	23	latch strip
	24	mandrel
25	25	recess
	26	film hinge
	27	transverse groove
	28	closure bead
	29	closure groove
30	30	hanger
	31	holding strip

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- 32 card body
- 33 holding strip
- 34 card body
- 35 arrow direction
- 5 36 arrow direction
- 37 clamping gap
- 38
- 39
- 40 hanger

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